EFFICACY REVIEW

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TYPE PRODUCT(S): (I,)D, H, F, N, R, S

DATA ACCESSION NO(S). 448919-01,-02,-03,-04,-05,-06,-07 & -08; D258780; S566936; Case# 063752; AC:361

PRODUCT MGR. NO. 03-Layne/Cole

PRODUCT NAME(S) Talstar® FT Flowable Termiticide/Insecticide

COMPANY NAME FMC Corporation Agricultural Products Group

SUBMISSION PURPOSE Provide performance data in support of claims for public health pests: stinging hymenopterous insects, fleas, cockroaches, mosquitoes, scorpions, spiders, flies.

CHEMICAL & FORMULATION Bifenthrin 7.9%
(0.5 lb. active liquid concentrate, diluted)

CONCLUSIONS & RECOMMENDATIONS The data presented in EPA Accession (MRID) Number 448919-01, having been obtained from a field application and laboratory assessment of a trial that evaluated activity of residues on alfalfa foliage towards bees, and that showed that liquid treatments containing 0.024% and 0.048% bifenthrin provided greater than 90% control of bees exposed to treated alfalfa foliage aged for 2 hours, document activity of the subject product toward stinging hymenopterous insects as represented by the honey bee, *Apis mellifera*, and the alfalfa leafcutting bee, *Megachile rotundata*, can be used to support activity of liquid bifenthrin applications containing 0.024% or greater for control of these pests. Similarly, the data in MRID No. 448919-02, containing results of a field trial that evaluated broadcast applications of bifenthrin liquid for cat flea adult control in turfgrass, in which the subject product applied at 0.1 and 0.2 lb AI/A provided 87.0 and 96.1% control, respectively, of adult *Ctenocephalides felis* exposed to turfgrass treated 1 day earlier, will support label claims for control of both adult and larval cat flea by broadcast applications of 0.1 to 0.2 lb AI/A. Similarly, the data in MRID No. 448919-03, containing results of a laboratory trial that evaluated various dilutions for residual German cockroach control on vinyl linoleum panels, showed that dilutions as low as 0.006% a.i. applied at 1.2 gals. per 1,000 sq.ft. provided 100% control of *Blattella germanica* for at least 60 days after application; results also show that dilutions of 0.0187% a.i. at 1.2 gals./1,000 sq.ft. (to be continued)

provided 100% control for at least 210 days after application; thus label claims for German cockroach control for liquid ready-to-use formulations or dilutions of concentrate formulations that contain 0.006% a.i. or greater are supported. Similarly, the data in MRID No. 448919-04, containing results of a laboratory trial evaluating direct spray applications of a bifenthrin liquid formulation for control of adult mosquitoes (*Aedes aegypti, Anopheles albimanus* and *Culex pipiens*), showed that 0.30% concentrate diluted to 0.0035% a.i. and applied at a rate of 6.2 ml per sq.ft. (0.021 lb AI/A) provided at least 98.0% knockdown of each species at 5 minutes after application and 100% control of each species at 24 hours after application and thus will support label claims for mosquito control for liquid ready-to-use formulations or dilutions of concentrate formulations that contain 0.0035% a.i. or greater. Similarly, the data in MRID No. 448919-05, containing results of a laboratory trial that evaluated direct spray applications of liquid formulations for scorpion control, showed that all products provided 100% knockdown at 4 hours after application and 100% control at 24 thru 96 hours after application, thus label claims for liquid ready-to-use formulations or dilutions of concentrate formulations that contain 0.025% a.i. or greater are supported. Similarly, the data in MRID No. 448919-06, containing results of a laboratory trial that evaluated direct spray applications of a liquid formulation for brown recluse spider control, showed that 0.05% a.i. provided 100% knockdown of *Loxosceles reclusa* at 5 minutes after application and 100% control at 24 hours after application, thus supporting label claims for brown recluse spider control for liquid ready-to-use formulations or dilutions of concentrate formulations that contain 0.05% a.i. or greater. Similarly, the data in MRID No. 448919-07, containing results of a laboratory trial that evaluated direct spray applications of a liquid formulation for house fly control, showed that 0.025% a.i. and 0.05% both provided 100% knockdown of *Musca domestica* at 5 minutes after application and 100% control at 24 hours after application, thus supporting label claims for house fly control for liquid ready-to-use formulations or dilutions of concentrate formulations that contain 0.025% a.i. or greater. Finally, the data in MRID No. 448919-08, containing results of a laboratory trial that evaluated direct spray applications of liquid formulations for black widow spider control, showed that 0.025% a.i. provided 100% knockdown of *Latrodectus* spp. adults at 30 minutes after application and 100% control at 24 and 48 hours after application, thus supporting label claims for black widow spider control for liquid ready-to-use formulations or dilutions of concentrate formulations that contain 0.025% a.i. or greater. We may thus conclude that these data support the following labeling amendments for pest claims for the subject product when applied according to rates and directions thereon: bees, hornets, wasps and yellowjackets; fleas; German cockroach; mosquitoes; scorpions; brown recluse spider; black widow spider; and house fly.

RL Vern L. McFarland, IB